

## ABSTRACT

**Objectives.** This study examined injection drug use among homeless men and women with severe mental illness in two sites.

**Methods.** The data were drawn from related clinical trials conducted in Baltimore (101 men, 49 women) and Boston (85 men, 33 women).

**Results.** The percentages of homeless men with a history of injection drug use were 26% in Baltimore and 16% in Boston; the corresponding rates among homeless women were 8% and 6%.

**Conclusions.** Taken together, these and previous results suggest high lifetime prevalences of injection drug use—and associated risks of HIV transmission—in this elusive population. (*Am J Public Health.* 1997;87:854-856)

# Injection Drug Use among Homeless Adults with Severe Mental Illness

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## Introduction

This study examined injection drug use among homeless men and women with severe mental illness. These individuals constitute a generally neglected and hard-to-reach population with a high prevalence of human immunodeficiency virus (HIV) infection.<sup>1,2</sup> Therefore, knowledge about their injection drug use is vital to efforts to control the HIV epidemic and the other adverse health effects of injecting drugs.

Prior research suggests widespread substance abuse in this population.<sup>3</sup> Data specifically on injection drug use, however, are scant. The only previous systematic study, conducted in a New York City men's shelter, found a 23% lifetime prevalence of injection drug use,<sup>4</sup> which is higher than those reported for inner-city neighborhoods of New York City.<sup>5</sup> The men's shelter study also found that drug injection practices that reduce the risk of HIV transmission, such as using sterile needles, had not yet been adopted by these men.<sup>4</sup>

Ideally, the prevalence of injection drug use in this population should be investigated in a sample that is representative, carefully diagnosed for psychiatric disorder, and of sufficient size to yield stable estimates. For mentally ill homeless individuals, however, no such sample has been obtained.<sup>3</sup> Faced with this constraint and with the need to pursue a potentially important finding from the study in New York City, we adopted an alternative strategy<sup>6</sup>; that is, we extended the investigation of injection drug use in this population to thoroughly diagnosed and well-described samples in urban areas outside of New York. We reasoned that if a high prevalence of injection drug use were also found in well-conducted studies in other cities, our study would be likely to represent a valid finding rather than an artifact of sampling.

## Methods

The samples were collected in Baltimore, Md, and Boston, Mass, as part of a coordinated series of clinical trials that

tested treatment strategies for homeless individuals with mental illness.<sup>7</sup> Although mental illness was defined somewhat differently at each site, these clinical trials focused primarily on individuals with affective and psychotic disorders that were severe, chronic, and disabling. Each of the trials has been described in detail elsewhere.<sup>8-10</sup>

Briefly, the Baltimore study compared assertive community treatment with usual care. The goal of assertive community treatment was to enable homeless persons to make better use of the service system to obtain housing, treatment, and support services. Subjects were screened for eligibility for the project in street and shelter locations and in psychiatric inpatient units. To enter the study, an individual was required to have a recent history of "literal" homelessness and a severe and persistent mental illness. The latter was defined as a *Diagnostic and Statistical Manual of Mental Disorders* (revised third edition) (DSM-III-R) Axis I diagnosis (not due to drugs or alcohol), along with either more than one psychiatric hospitalization or persistent disability as a result of mental illness (for further details on these criteria, see references 7 and 8). He or she also had to understand English and to have lived in Baltimore for more than 3 of the previous 6 months. One hundred eighty-three persons were identified as eligible for the trial; more than two thirds of these individuals were identified in shelter and street locations. Among those eligible, 150 (101 men and 49 women; 82%) agreed to participate and entered the study.

The Boston study compared the effectiveness of two supportive housing

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**TABLE 1—Lifetime Prevalence of Injection Drug Use (IDU) among Homeless Individuals with Severe Mental Illness in Baltimore and Boston**

	Baltimore				Boston			
	Men		Women		Men		Women	
	No. in Subgroup	IDU in Subgroup, No. (%)	No. in Subgroup	IDU in Subgroup, No. (%)	No. in Subgroup	IDU in Subgroup, No. (%)	No. in Subgroup	IDU in Subgroup, No. (%)
Age group, y								
<35	42	11 (26)	18	1 (6)	33	6 (18)	16	2 (13)
35–44	45	14 (31)	22	3 (14)	33	6 (18)	9	0 (0)
>44	14	1 (7)	9	0 (0)	19	2 (11)	8	0 (0)
Race/ethnicity								
African American	76	21 (28)	32	2 (6)	32	5 (16)	16	1 (6)
White	21	3 (14)	15	1 (7)	49	9 (18)	12	1 (8)
Other	4	2 (50)	2	1 (50)	4	0 (0)	5	0 (0)
Diagnosis								
Schizophrenia/schizo-affective	59	12 (20)	28	1 (4)	59	11 (19)	14	1 (7)
Other	42	14 (33)	21	3 (14)	26	3 (12)	19	1 (5)
Total	101	26 (26)	49	4 (8)	85	14 (16)	33	2 (6)

models for homeless people with severe mental illness, namely, independent living and participant-run group homes. The subjects were recruited from a transitional shelter designated for homeless individuals with mental illness. Shelter residents were excluded from the trial if they posed a safety risk in independent living or did not understand English. Among 188 eligible persons, 32 chose not to participate in the study, and 38 found alternative housing prior to being randomized to one of the two housing models; the remaining 118 (85 men and 33 women; 63%) entered the study.

The trials used the Structured Clinical Interview for DSM-III-R for psychiatric diagnoses.<sup>11</sup> This diagnostic instrument has demonstrated reliability among psychiatric patients and among the homeless.<sup>11,12</sup> It was administered by trained research interviewers.

The Addiction Severity Index was used to elicit information on drug and alcohol use.<sup>13</sup> This instrument has also been extensively used and tested among the homeless.<sup>14–16</sup> Both trials modified the standard form, however, to include questions on lifetime history of injection drug use. In Baltimore, subjects were asked whether they had ever used a specific drug and, if so, whether injection was the usual method of taking it. In Boston, subjects were asked whether they had ever injected any drug. Although the number who usually injected a specific drug would be less than the number who had ever injected any drug, the data from the two

sites were deemed sufficiently comparable for the purpose of this report, namely, to examine whether a high prevalence of injection drug use is found across different samples of homeless mentally ill people.

## Results

The mean age of participants from the two sites was similar: 37 years (SD = 8.9) in Baltimore and 38 years (SD = 8.1) in Boston. Race/ethnicity differed, however, reflecting local demographics: in Baltimore, 108 (72%) subjects were African American, 36 (24%) were White, and 6 (4%) were of another race/ethnicity (3 were Latino); in Boston, 48 (41%) were African American, 61 (52%) were White, and 9 (8%) were of another race/ethnicity (6 were Latino). For men and women combined, the majority in each of the sites were diagnosed as having schizophrenia or schizoaffective disorder (87 [58%] in Baltimore and 73 [62%] in Boston).

The proportions (and exact binomial 95% confidence intervals) of men with a history of injection drug use were .26 (.18, .35) in Baltimore and .16 (.09, .26) in Boston; the corresponding proportions among women were .08 (.02, .20) in Baltimore and .06 (.01, .20) in Boston (Table 1). In both sites, and in both men and women, the trend was for those less than 45 years of age to be more likely than those 45 years of age or older to have injected drugs. Associations of injection

drug use with diagnosis and race/ethnicity were not consistent, however, across either site or gender.

## Discussion

This study found a high lifetime prevalence of injection drug use among homeless individuals with severe mental illness in two sites. The proportions of all men who had injected drugs were 26% in Baltimore and 16% in Boston; a lesser but not insignificant proportion of women had injected drugs (Baltimore: 8%; Boston: 6%). In each of the two sites, men and women less than 45 years of age were more likely than older individuals to have injected drugs.

For both men and women, these figures far exceed the prevalence of injection drug use in the general population.<sup>17–21</sup> Indeed, these prevalences exceeded those reported for inner-city communities with extremely high rates of injection drug use and HIV infection.<sup>5</sup> With less certainty, it can also be inferred that injection drug use was more frequent in these samples than among domiciled individuals with similar mental illness.<sup>17,20</sup>

The samples were not designed to be fully representative of homeless individuals with severe mental illness, and indeed the difficulties of obtaining such a sample are virtually insurmountable.<sup>3,22</sup> Nonetheless, a high prevalence of injection drug use was found among the subjects of two related clinical trials in the present study

and in a previous study that used comparable methods. The samples were well described and carefully diagnosed, and participants were demographically similar to homeless mentally ill individuals ascertained in well-conducted surveys in the same cities.<sup>3</sup> Therefore, it seems unlikely that the high prevalences represent merely artifacts of sampling.

Although the growing literature on injection drug use and HIV transmission has not overlooked the homeless population as a whole, almost no attention has been paid to the subgroup of homeless people with severe mental illness. Yet, the patterns of injection drug use—and of HIV transmission—for this subgroup may be distinctive; for instance, our clinical experience suggests that intermittent injection of cocaine may be a common pattern for these individuals. In addition, HIV-preventive interventions may need to be adapted to foster the participation of mentally ill men and women and to take account of the ways in which their severe psychiatric symptoms and cognitive impairments affect learning.<sup>23,24</sup> Their distinctive characteristics, and the present results, suggest a need for research on injection drug use and HIV prevention that focuses explicitly on this elusive population. □

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